

REMARKS/ARGUMENTS

The Status of the Claims.

Claims 26 to 37, 40 to 42, 44 to 48 and 60 to 61 are pending with entry of this amendment, claims 1 to 25, 38, 39, 43 and 49 to 59 being cancelled. Claims 26 and 41 are amended herein. These amendments introduce no new matter and support is replete throughout the specification. These amendments are made without prejudice and are not to be construed as abandonment of the previously claimed subject matter or agreement with any objection or rejection of record.

With respect to claim 26, support for populations of mixed subsets can be found throughout the specification. For example, see specification at paragraphs 10, 41, 44, 48, 57, 60, 62 and 105.

With regard to claim 41, the amendment merely further clarifies that the wavelength is of light.

Applicants submit that no new matter has been added to the application by way of the above Amendment. Accordingly, entry of the Amendment is respectfully requested.

35 U.S.C. §112, Second Paragraph.

Claims 41 and 42 were rejected under 35 U.S.C. §112, second paragraph, as allegedly indefinite because of, e.g., the "comprise an intensity" term. The Examiner has graciously suggested alternate phraseology, which has been incorporated into the present claims. Applicants respectfully request withdrawal of the section 112 rejection.

35 U.S.C. §103(a).

Claims 26 to 29, 31 to 37, 40 to 42, 46 to 48 and 60 to 61 were rejected under 35 U.S.C. §103(a) as allegedly obvious based on Cao in light of Bruchez '323. Claims 44 and 45 were rejected under 35 U.S.C. §103(a) as allegedly obvious based on Cao in light of Bruchez '323, further in view of Weiss. Claims 26 to 29, 31 to 37, 40 to 42, 44 to 48, and 60 to 61 were rejected under 35 U.S.C. §103(a) as allegedly obvious based on Cao in light of Bruchez '323, further in view of Bruchez 1998. To the extent the rejection is deemed applicable to the amended claims, Applicants traverse.

A proper analysis under the recently reaffirmed *Graham v John Deere* standard demonstrates the non-obviousness of the invention. As recently reaffirmed by the Supreme Court in *KSR International Co v. Teleflex* (550 U.S. ____ (2007); 127 S. Ct. 1727, 1740-41, 82 USPQ2d 1385-1396 (US 2007)), the appropriate standard for analyzing questions of obviousness is that:

the scope and content of the prior art are determined, differences between the prior art and the claims at issue are analyzed and the level of ordinary skill in the pertinent art is resolved. Against this background the obviousness or non-obviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unresolved needs, failure of others, etc. might be utilized to give light to the circumstances surrounding the origin of the subject matter to be patented.

Id. quoting *Graham v. John Deere of Kansas City* 383 U.S. 1, 17-18.

In addition, the Office has acknowledged that the “teaching-suggestion-motivation (TSM) test was *not* overturned by *KSR*.” The bulk of well established case law, such as described in MPEP 2143.01 still applies. For example, where the cited references teach away from the invention, it is not obvious. To show obviousness, the combination of cited references must teach all of the elements of the claims, the Office must provide a clear and articulated reason motivating one of skill to make the proposed combination, and there must exist in the art a reasonable expectation of success in any proposed combination. Here, the rejection fails each of these requirements, as applied to the *Graham* factors.

Claims are not obvious based on Cao and Bruchez '323. Cao teaches that two different subtypes of nanocrystals exist separately (Figure 5). Bruchez '323 teaches “separate populations of semiconductor nanocrystals, wherein each population exhibits a different characteristic photoluminescence spectrum” can be prepared. However, these combined references do not teach all limitations of, e.g.: 1) “a population nanocrystals comprising a mixture of two or more subsets of [different] nanocrystals”, or 2) “wherein the subsets are characterized by different excitation wavelengths”, as required by independent claim 26.

At page 6 of the Action, the Office acknowledges that “Cao et al. does not disclose mixing the two species into a single population ...” The Office attempts to cure this defect by citing the secondary reference Bruchez '323, at column 8, lines 45-50:

"As used in this specification and the appended claims, the singular forms 'a,' 'an' and 'the' include plural references unless the content clearly dictates otherwise. Thus, for example, reference to 'a semiconductor nanocrystal' includes a mixture of two or more such semiconductor nanocrystals, ..."

Applicants note that this citation discusses the possibility that reference to a single nanocrystal can include the concept of two or more of the same ("such") nanocrystals. This reference can not reasonably be interpreted to teach a mixed population of two or more different nanocrystal subsets, and wherein the two different subsets comprise different excitation wavelengths. Because the Action clearly does not state a case here, the rejection of claim 26, and associated dependent claims, should be withdrawn. That is, the combined references would not have taught one of skill to practice the mixed population of the claims wherein the subsets within the population have different excitation wavelengths.

Claims are not obvious based on Cao and Bruchez '323, in light of Bruchez 1998.
Bruchez 1998 describes "single-excitation" labeling with nanocrystals. This additional reference to the combination does not cure the defects in the rejection of independent claim 26, and so can not render any claim obvious. For example, the single excitation/dual emission teaching of Bruchez 1998 does not help one of skill in the art to bridge the gap to provide a population of nanocrystals comprising a mixture of two or more subsets of nanocrystals which subsets are characterized by different excitation wavelengths.

CONCLUSION

In view of the foregoing, Applicants believes all claims now pending in this application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the claims are deemed not to be in condition for allowance after consideration of this Response, a telephone interview with the Examiner is hereby requested. Please telephone the undersigned at (510) 769-3510 to schedule an interview.

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Attachments:

- 1) A transmittal sheet; and,
- 2) A receipt indication postcard.